ABSTRACT

NOVEL COMPOSITIONS AND METHODS FOR IMMUNOTHERAPIES COMPRISING SMALL MOLECULE INTEGRIN RECEPTOR-LIGAND AGONIST ADJUVANTS

Small molecule integrin ligand mimetics facilitate integrin-ligand interactions, which maybe used to prepare vaccines, adoptive cell therapies, immunotherapies for cancer, and a variety of other conditions. As integrin mediated cell-cell interactions are critical to antigen presentation and effector cell killing, increasing the efficiency of integrin receptor-ligand interactions will stabilize the immune synapse and improve effector functions. Compositions and methods including the mimetics enhance: (1) the priming of vaccines (including, but not limited to, cancer vaccines); (2) cytolytic activity of adoptive cell therapies (including, but not limited to ϒδT-cells, CTLs, NK, iNKT); (3) immunotherapies (including, but not limited to, negative checkpoint blockage strategies such as anti- CTLA-4 and anti-PD-1); and (4) biologic therapies (including, but not limited, to trastuzumab and rituxamab), whereby the mechanism-of-action includes antibody dependent cellular cytotoxicity (ADCC).

FIG. 1